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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/798,586

03/10/2004

James W. Bush

03-597

6345

34704

7590

06/27/2006

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EXAMINER

TANNER, HARRY B

ART UNIT

PAPER NUMBER

3744

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/798,586	Applicant(s) BUSH, JAMES W.	
	Examiner Harry B. Tanner	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 7, 8, 11 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-3, 7-8, 11 and 13-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 11, 13, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocher in view of Lifson. Kocher discloses a screw-type compressor having outlet 12, inlet 8 and a first port 20 between the inlet and outlet, condenser 14, first evaporator E connected to the condenser outlet and the inlet and second higher temperature evaporator E' connected to the condenser outlet and the first port (see col. 1, lines 68 to col. 2, lines 1-45) for providing cooling of different temperatures to two separate compartments. Lifson teaches the use of screw and scroll type compressors for providing two suction pressures for use in a refrigeration system (see col. 2, lines 17-32) and the use of an economizer 20 connected to the intermediate port of a compressor 33 in order to increase performance of a refrigeration system (see col. 3, lines 4-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Kocher such that it included the use of a scroll type compressor rather than a screw type compressor and included the use of an economizer connected to the intermediate port of the compressor in order to increase performance of the system in view of the teachings of Lifson.

Claims 1 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tinkey. Tinkey discloses a compressor 2 having outlet, inlet 3 and a first port 4 between the inlet and outlet, condenser 16, first evaporator 5 connected to the

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condenser outlet and the inlet and second higher temperature evaporator 6 connected to the condenser outlet and the first port and first heat exchanger 9 and second heat exchanger 10 for exchanging heat from the refrigerant discharged by the condenser 16 with the refrigerant discharged by the evaporators 5,6 (see Figure 2 and col. 2, lines 49-67) for providing cooling of different temperatures to two separate compartments.

Tinkey also discloses the first and second heat exchangers arranged in series (see Figure 7 and col. 4, lines 52-66). The arrangement of the first heat exchanger downstream of the second heat exchanger is considered to have been an obvious matter of engineer design based upon the location of the two evaporators since the result will not be sufficiently different, i.e. both heat exchangers will provide subcooling of the refrigerant leaving the condenser regardless of which is connected to the condenser outlet first.

Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tinkey as applied to claim 1 above, and further in view of Kramer, Jr. Kramer teaches branching the flow of refrigerant from the condenser 20 into a plurality of branches in order to provide refrigerant from the condenser outlet to each heat exchanger 28 connected to the outlet of a plurality of evaporators 17 (see Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Figure 2 of Tinkey such that it included the branching the flow of refrigerant from the condenser into two branches in order to provide refrigerant from the condenser outlet to each heat exchanger connected to the outlet of the evaporators in view of the teachings of Kramer.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tinkey as applied to claim 1 above, and further in view of Lifson as applied to claim 8 above.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tinkey in view of Kramer, Jr as applied to claim 7 above, and further in view of Lifson as applied to claim 8 above.

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry B. Tanner whose telephone number is (571) 272-4813. The examiner can normally be reached 8:30 am to 5:00 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler, can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>.

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Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Harry B. Tanner". The signature is fluid and cursive, with the first name "Harry" being more prominent than the last name "Tanner".

Harry B. Tanner  
Primary Examiner  
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